CITY OF LODI
INFORMAL INFORMATIONAL MEETING
"SHIRTSLEEVE" SESSION
CARNEGIE FORUM, 305 WEST PINE STREET
TUESDAY, FEBRUARY 5, 2008

An Informal Informational Meeting ("Shirtsleeve" Session) of the Lodi City Council was held Tuesday, February 5, 2008, commencing at 7:00 a.m.

A. ROLL CALL

Present: Council Members – Hansen, Hitchcock (arrived at 7:01 a.m.), Johnson, Katzakian, and Mayor Mounce

Absent: Council Members – None

Also Present: City Manager King, City Attorney Schwabauer, and Deputy City Clerk Perrin

B. TOPIC(S)

B-1 "Proposed West Side 60kV Transmission Project"

City Manager King briefly introduced the subject matter of the proposed west side 60kV transmission project.

With the aid of a PowerPoint presentation (filed), Electric Utility Director George Morrow explained that Lodi currently imports its power through a single pipe from PG&E's Lockeford Substation to the east. The City's liability is contingent on the Lockeford Substation, and over the years outages at this substation have resulted in power failures in Lodi. The solution is to construct new transmission facilities to the west to diversify source and location of power imports. Additionally, Mr. Morrow explained that Lodi's current import capacity is 130 megawatts (mw), which is not enough capacity on a long-term basis, and the combustion turbine is often utilized to reliably meet electric loads over that amount. PG&E could upgrade its 60kV transmission circuits in the area; however, it has not committed to a specific timetable to address the needed improvements. In lieu of the upgrade, construction of new transmission facilities would increase import capacity.

Council Member Johnson questioned if PG&E is mandated to upgrade its facility, to which Mr. Morrow responded that it has a statutory requirement to provide reliable, firm transmission capacity; however, PG&E must work through the California Independent System Operator (CalISO), which is a very involved process.

Mayor Pro Tempore Hansen questioned what the consequences would be if the capacity issues were not addressed, to which Mr. Morrow stated that the Utility would need to curtail the load, by switching off circuits and implementing rotating blackouts, or import more power.

Mr. Morrow stated that a new transmission line to the west is an excellent solution to the reliability and capacity issues due to the fact that it would aid in the performance of the electrical network, that strong electrical systems exist in the vicinity of I-5, and there is an opportunity for direct connection to the Northern California Power Agency (NCPA) power projects. This would enable the City to bypass paying transmission costs to other agencies, and the savings could potentially cover the circuit costs. Previous attempts were made in 1988, 1998, and 2001 to build new transmission into Lodi, and, although progress was made, no final actions were taken to complete the effort, due largely to concerns expressed by the agricultural community. Funding to cover the project was allocated from the NCPA bond issue; however, those funds remained unused for quite some time and were eventually utilized for other purposes. City Council recently authorized retaining Auriga Corporation to review the project, and the consultant has identified seven possible routes and more closely reviewed three, taking into consideration the concerns of the agricultural community.

In response to Mayor Pro Tempore Hansen, Mr. Morrow stated that one of the benefits of the western line is "behind the meter" generation (i.e. using Lodi's own circuits), which could save $5 to $10 per mw hour. Additionally, the Lodi Energy Center could reduce transmission charges for the project. All of these reductions in cost would be passed onto the rate payers.

Mr. Morrow briefly reviewed the seven alternatives, using a detailed diagram and an aerial view, and explained some of the pros and cons. Some of the concerns on the various options include running the line straight along Highway 12 as previously discussed, lack of frontages on Highway 12, slicing up properties if run diagonally, and interference with the airport that may require costly underground work.

In response to Mayor Pro Tempore Hansen, Mr. Morrow stated that the City would most likely work with PG&E to upgrade the existing utility poles, rather than build new ones on the opposite side of the street. Where the PG&E poles end, the line could veer south, thereby missing the wineries. Mr. Morrow added that the new poles would be higher.

Council Member Johnson questioned what would happen with the existing poles near the proposed substation, to which Mr. Morrow replied that those are stub poles and they would be cleaned up and integrated. Mr. Johnson questioned how much more it would cost if a new substation was built in the vicinity of Davis Road and Harney Lane. Mr. Morrow explained that the substation is proposed to be located on Highway 12 near Chili's restaurant; the other site is not being recommended. The consultant only identified that location on the off chance the substation could not be built on Highway 12.

In response to Council Member Hitchcock, Mr. Morrow stated that, as long as the utilities are built overhead, it is anticipated that the cost of the project would be less than running the line straight down Highway 12 as originally proposed because the cost is based on a linear foot calculation. Furthermore, overhead is more reliable and is easier to maintain and repair. A complete underground project would significantly increase the cost of the project; therefore, the objective is to select a route that does not go underground. The project cost would be in the range of $8 million to $10 million, with an annual fixed cost of $800,000 to $1 million; however, savings from the behind the meter generation could equal or exceed the costs of the project.

In response to Council Member Johnson, Mr. Morrow stated that the savings and opportunity to offset costs would be pointed out to the rating agencies. It may be possible to bundle the debt service with the Lodi Energy Center or to join the Transmission Agency of Northern California bond that it will be taking out to upgrade and build circuits. It is not anticipated that this project would increase rates.

Mayor Pro Tempore Hansen stated that, because of the volatility in the rate market and issues associated with CalISO, the rates will continue to increase; however, this project could slow down the need for rate increases or, better yet, reduce them.

In response to Council Member Katzakian, Mr. Morrow stated that the new power plant operates 85% to 90% of the time and is down only for regular maintenance purposes.

Mr. Morrow summarized that staff is intending to move forward with this project, will work with area residents and impacted parties to gain support for the preferred route, and will return to Council with a final report. Once the route is identified, the required environmental impact work will take place, with an anticipated operational date no later than 2011 to 2012. Mr. King added that no formal actions would be taken outside of the Council.

PUBLIC COMMENTS:

- Terry Quashnick, representing a local plastics company, expressed support for the project, stating that outages have a serious negative affect on its industry, particularly when the system shuts down in the middle of a production run. He hoped that all involved parties can work together to see this project through.

Mayor Pro Tempore Hansen expressed support for this project as it would address reliability, capacity, and controlling costs, which would have a positive affect on rate payers.

In response to Council Member Hitchcock, Mr. Morrow stated that there is some flexibility in connecting with the western system and staff will monitor how the CalISO marketing strategy affects the City. In further response, Mr. Morrow stated that the cost to install underground lines at the airport doubles the cost of the transmission; however, he believed there may be other alternatives, and staff will continue to look into the matter and work with airport staff. Council Member Hitchcock expressed support for constructing this project as inexpensively as possible and believed that, if it is more costly to build underground due to the airport, other alternatives should be explored.

Council Member Johnson agreed with Ms. Hitchcock and pointed to page 75 of the Transmission Line Study Final Report, stating that the City legally has the right to take whatever steps necessary to accomplish this goal.

In response to Council Member Katzakian, Mr. Morrow stated that the route straight down Highway 12 will not initially be considered, due to the concerns of property owners as well as the higher cost; however, the possibility will not be rejected entirely in case there is no better approach.

C. COMMENTS BY THE PUBLIC ON NON-AGENDA ITEMS

None.

D. ADJOURNMENT

No action was taken by the City Council. The meeting was adjourned at 7:47 a.m.

ATTEST:

Jennifer M. Perrin
Deputy City Clerk

AGENDA ITEM 6-1

CITY OF LODI
COUNCIL COMMUNICATION

AGENDA TITLE: Proposed West-side 60 KV Transmission Project (EUD)

MEETING DATE: February 5, 2008

PREPARED BY Electric Utility Director

RECOMMENDED ACTION: Presentation only.

BACKGROUND INFORMATION: Currently, the Lodi Electric Utility Department (EUD) is investigating the construction of a new power transmission project. This five to seven mile project is expected to stretch from the vicinity of Lower Sacramento Road and Highway 12 out to the Lodi White Slough Wastewater Treatment Control Facility. Lodi would like to construct this project for operation by 2012 (i.e. three to four years).

At the present time, EUD receives bulk electricity through three 60 KV power lines but they all emanate from one source – PG&E's Lockeford Substation located east of Lodi. Should weather conditions, mechanical failure or human error impact this substation, the City of Lodi is in peril of losing electric service on a City-wide scale. This very scenario has in fact *occurred* several times since the year 2005 and a number of times previously.

In order to enhance service reliability and reduce the potential for city-wide electric interruptions, EUD is proposing to construct new power lines to interconnect with high capacity transmission circuits located to the west of Lodi near Interstate 5. This project, expected to be composed of two new 60 KV transmission lines, would provide Lodi a much-needed second source of electricity to meet customers' energy needs reliably.

Although the exact mute for this new transmission line has yet to be determined, EUD is considering as many as seven (7) alternatives. The utility's goal is to construct two overhead transmission lines (both located on one pole) in a manner that cost-effectively minimizes the impact on adjacent property Owners and the environment.

Ultimately, this second transmission line will improve overall electric utility grid reliability for Lodi residents and businesses, aid in meeting Lodi's future energy needs and reduce transmission delivery charges.

FISCAL IMPACT: Not at this time.

FUNDING: Not applicable.

George F. Morrow
Electric Utility Director

GFM/lst
Attachments

APPROVED: _____
Blair King, City Manager

Electric Utility Department

West 60KV Transmission Project

City Council Shirtsleeve Session
February 5, 2008

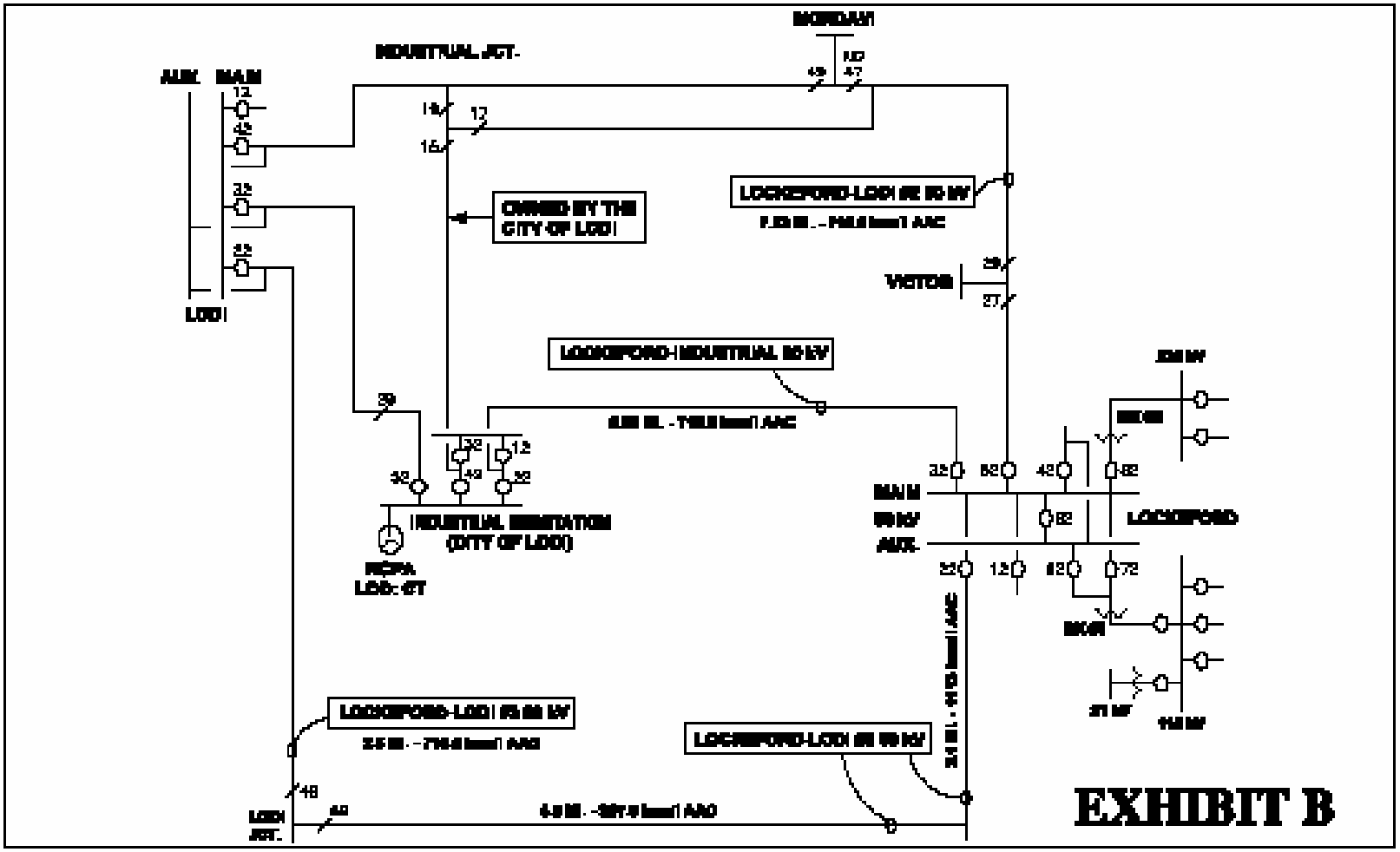
Problem 1

- Lodi presently imports its power through a single “pipe” composed of three circuits
- “Pipe” emanates from PG&E’s Lockeford Substation
- Over the years, outages at Lockeford Sub have resulted in total blackout of power in Lodi
- Radial electric service is not accepted industry practice as to reliability

Recent City-Wide Power Outages

Interruption Date	Duration	Remarks
1/25/2005	12 minutes	Contractor working on 60 KV line caused flashover
11/4/2005	Momentary (less than 2 minutes)	Line relay from PG&E Bellota Substation.
3/6/2006	2 hours, 23 minutes	Incoming 60 KV de-energized by PG&E 230 KV breaker trip.
10/29/07	Momentary	Lightning tripped off two 230KV circuits at Lockeford Substation

Lockeford to Lodi



Solution 1

- Construct new transmission facilities to diversify source/location of power imports
- Existing circuits are located to east of Lodi
- New transmission to the West is obvious solution

Problem 2

- Import capacity into Lodi today is only 130 MW
- Must run Lodi CT (25 MW) to reliably meet electric loads over 130 MW
- 2008 Peak Load is projected at ~152 MW.

Import Capacity

Lodi Peak Load

- ✓ 2008 Projected Summer Load 152 MW
- ✓ August 30, 2007 134 MW
- ✓ July 25, 2006 145 MW

Transmission Import Ratings

- ✓ Summer Rating (w/ CT) 155 MW
- ✓ Summer Rating (w/o CT) 130 MW

Solution 2

- PG&E can “reconductor” (upgrade) 60KV transmission circuits in the area.
  - PG&E has identified problem but no timetable yet for needed improvements
- Lodi can construct new transmission facilities to increase import capacity

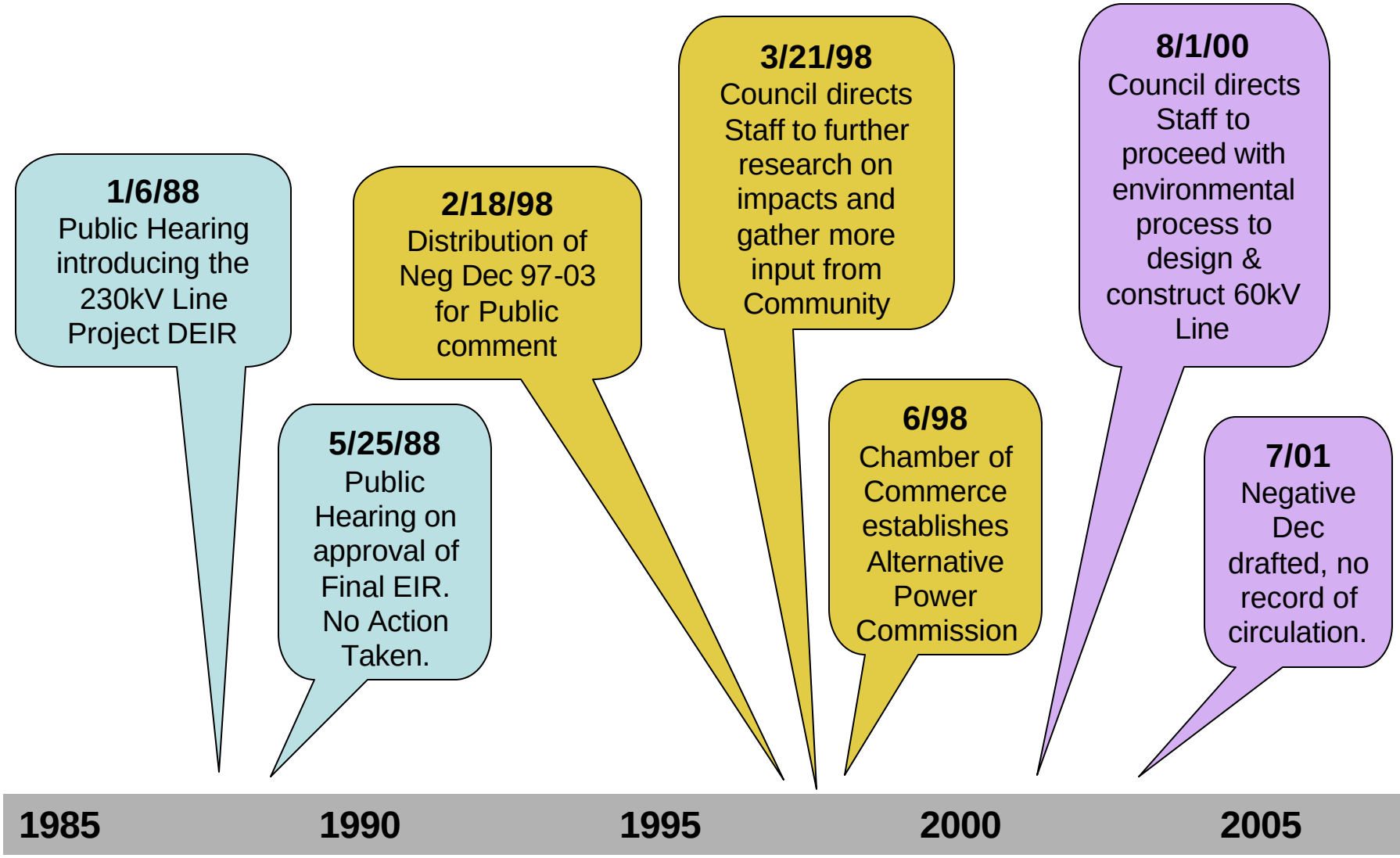
Western Line

- New transmission to the west is an excellent solution to reliability and capacity problem
  - New “feed” from west helps the performance of the electrical network
  - Strong electrical systems exist in vicinity of I-5
  - Opportunity to direct connect to vicinity of NCPA power projects

Previous Work

- There have been a number of studies and attempts to gain approvals to build new transmission into Lodi over past 20 years
  - 1988
  - 1998
  - 2001
- Generally siting concerns by the agricultural community led to no action on transmission project

History of West Transmission Project

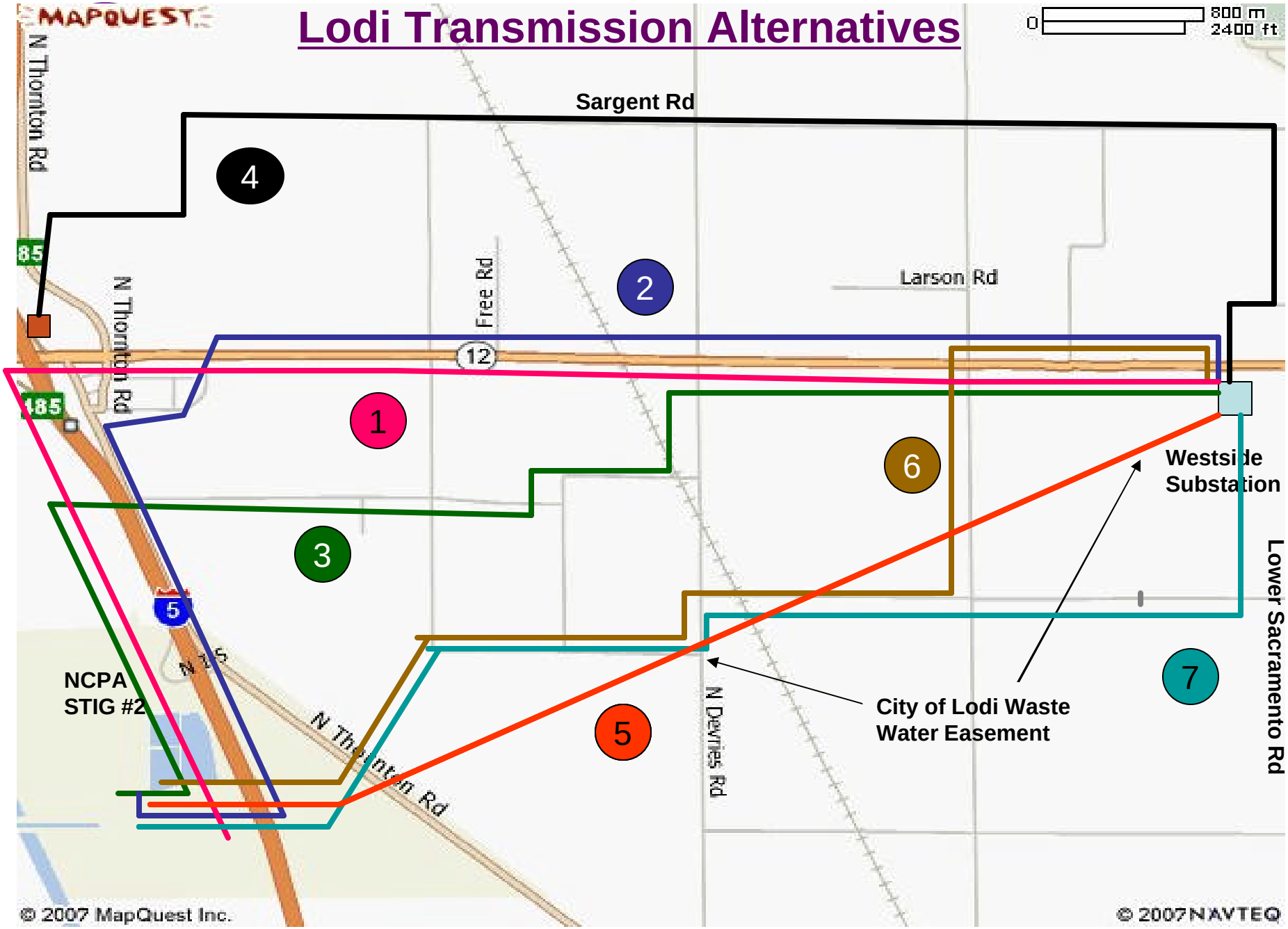


New Conceptual Study

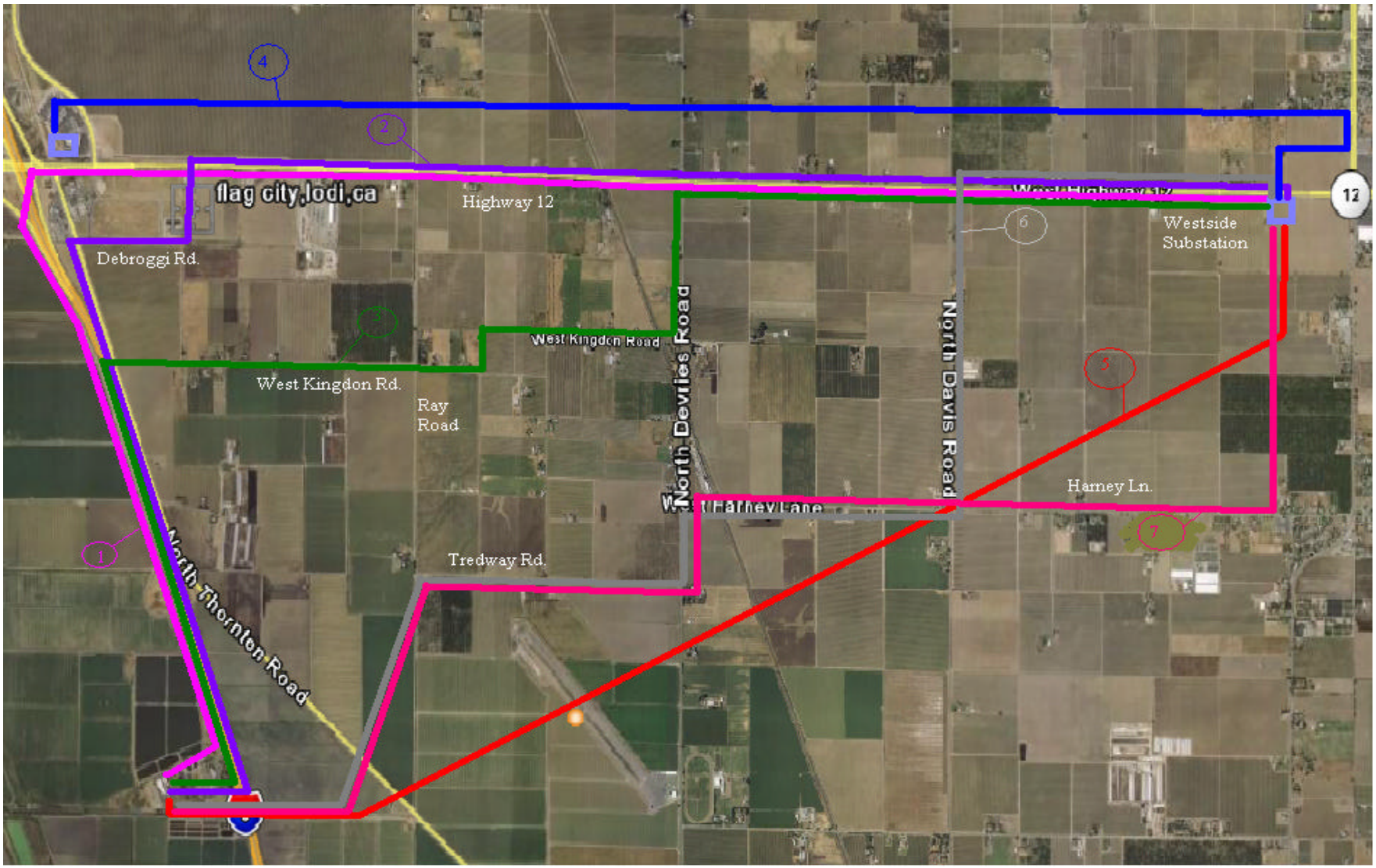
- Auriga Corporation was retained to performed to review Lodi transmission
- Requested to look at past work and to look at routing options
- Auriga identified seven (7) possible routes and looked at three (3) in more detail

Auriga Study Objectives

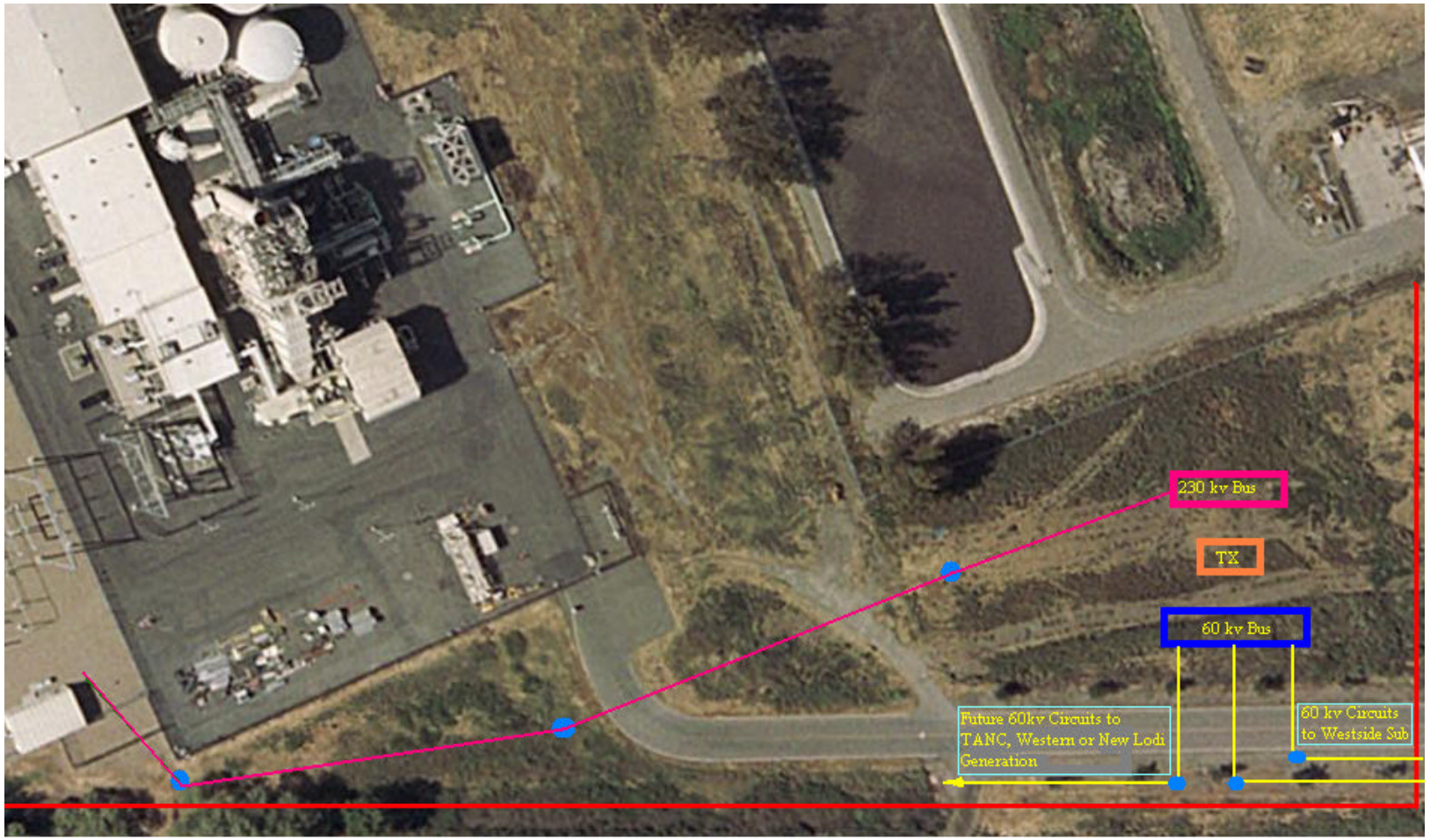
- **Research the routes, impacts, and mitigation needed to permit and construct a 60kV transmission line from White Slough to Westside Sub.**
  - Cost effective, environmentally sensitive design
  - Minimize impact upon
    - Environment
    - Public
    - Property Owners
  - Meet electric capacity needs of the City of Lodi
  - Improve reliability for Lodi customers and the region.
  - Reduce transmission charges.


Lodi Transmission Alternatives
MAPQUEST
0
800 m
2400 ft
N Thornton Rd
Sargent Rd
4
85
N Thornton Rd
Free Rd
2
Larson Rd
12
185
1
6
Westside
Substation
3
5
NCPA
STIG #2
N Thornton Rd
N Devries Rd
5
City of Lodi Waste
Water Easement
7
Lower Sacramento Rd
© 2007 MapQuest Inc.
© 2007 NAVTEQ

Aerial View of Alternatives

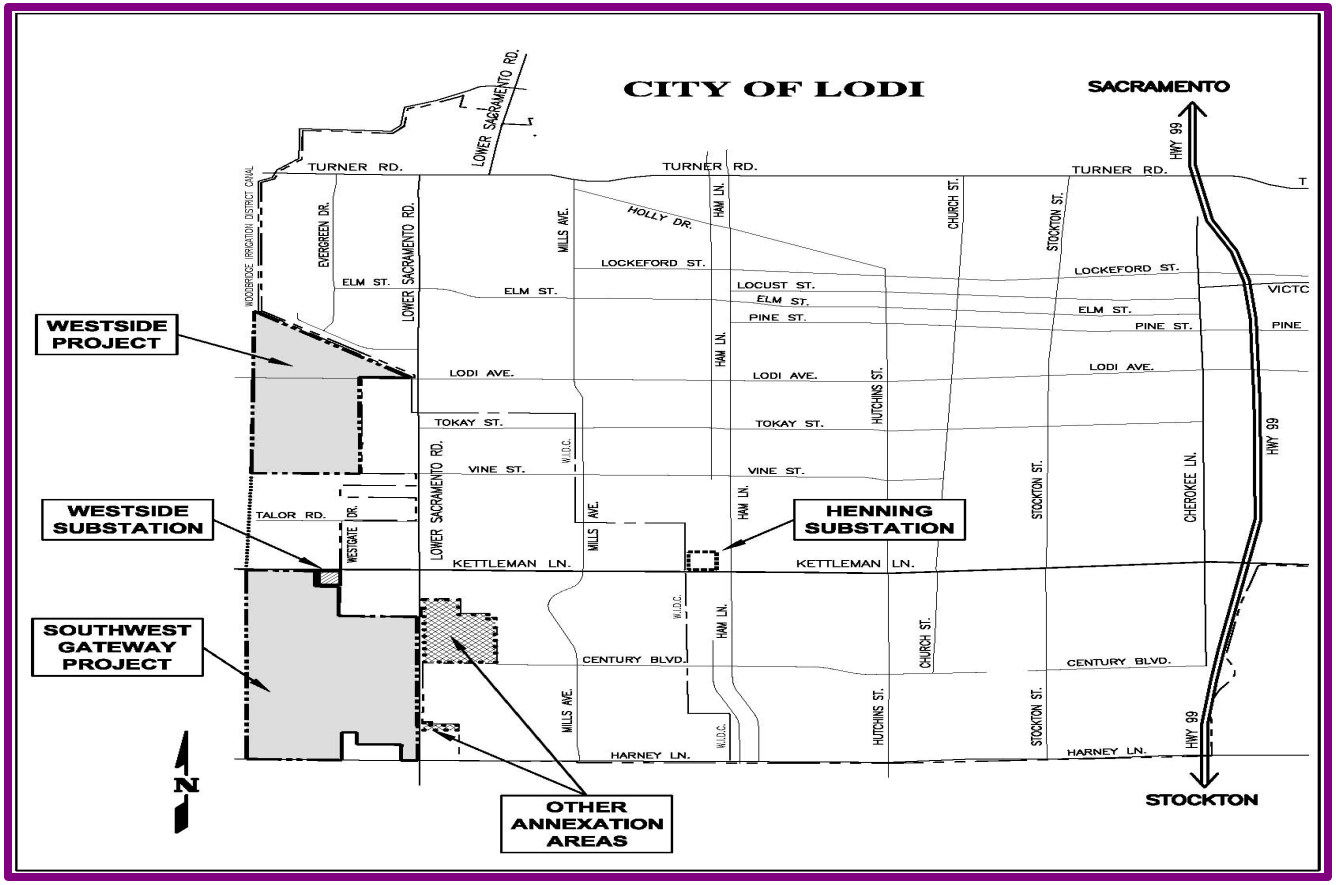


Western Interconnection

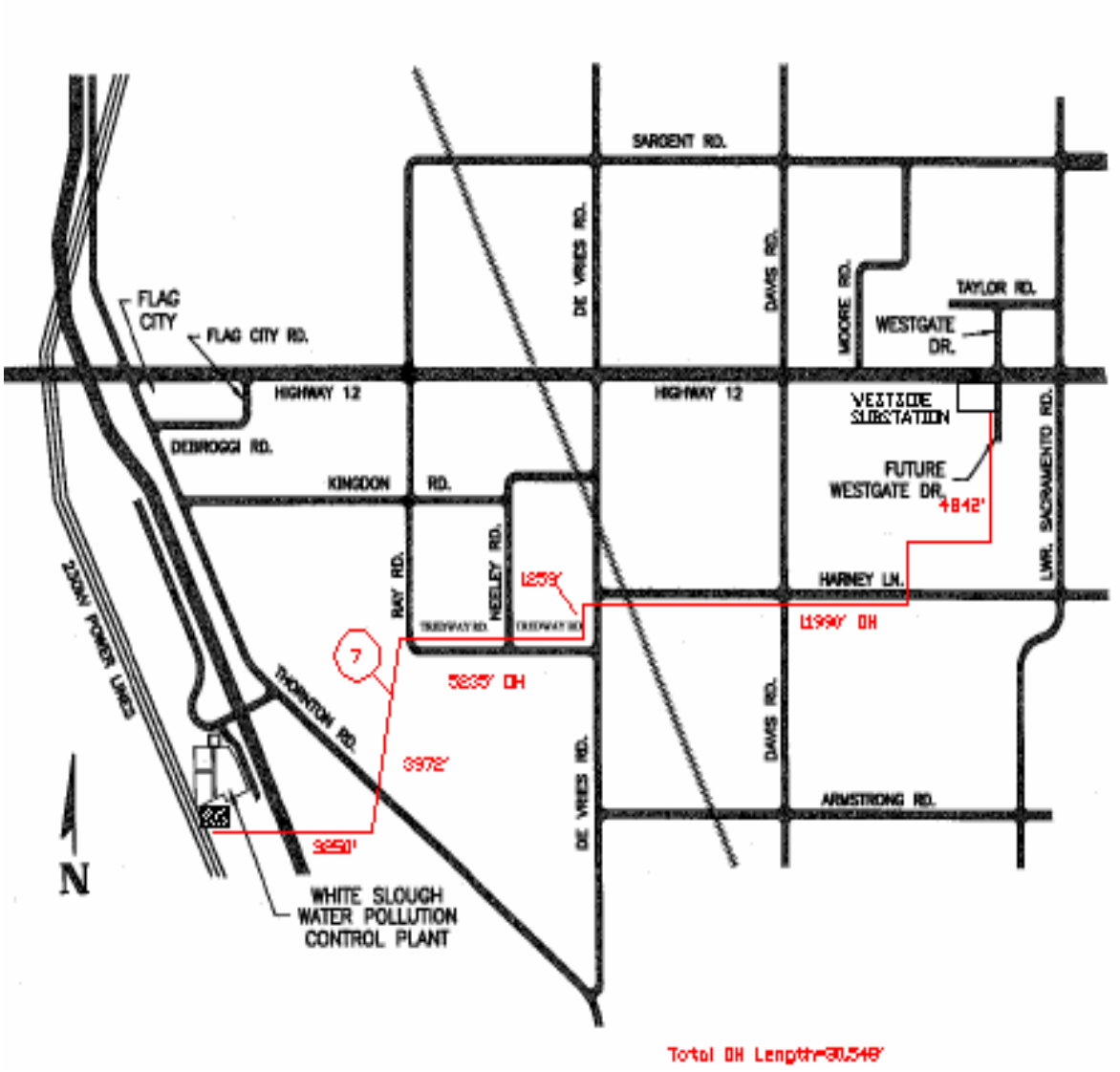


Westside Substation Location

- Corner of Westgate Drive & HWY 12



Alternative 7



Scope

5.75 Miles, Single Circuit 60kV

- *90% Wood Poles, 55' Height*
- *10% Wood and/or Steel Poles, 65' – 90' Height.*

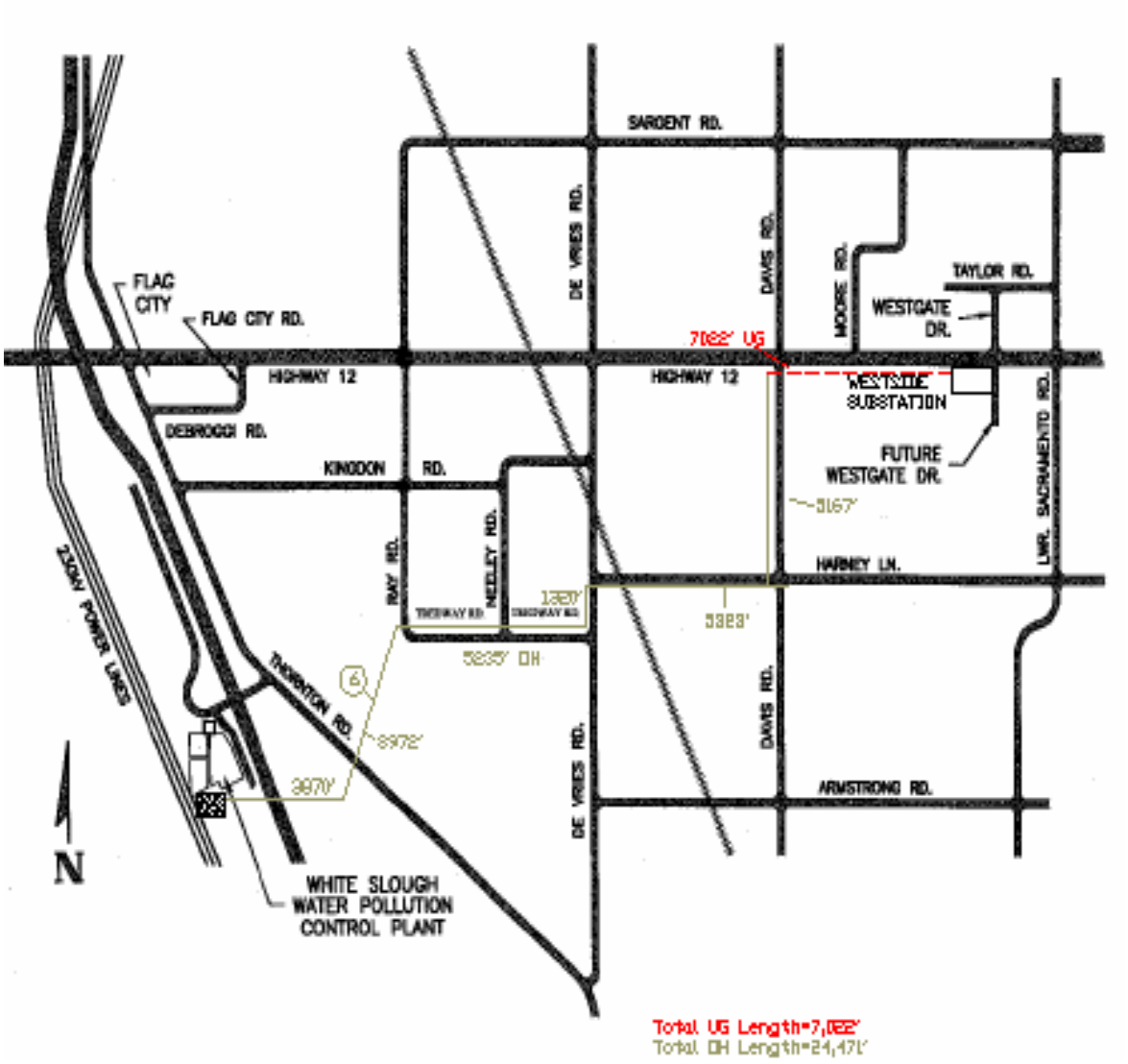
Benefits

- *Short route*
- *Avoids past issues on Hwy 12*

Risks

- *Airstrip Mitigation*
- *Southwest Gateway*

Alternative 6



Scope

5.55 Miles, Single Circuit 60kV

- *90% Wood Poles, 55' Height*
- *10% Wood and/or Steel Poles, 65' – 90' Height.*

Benefits

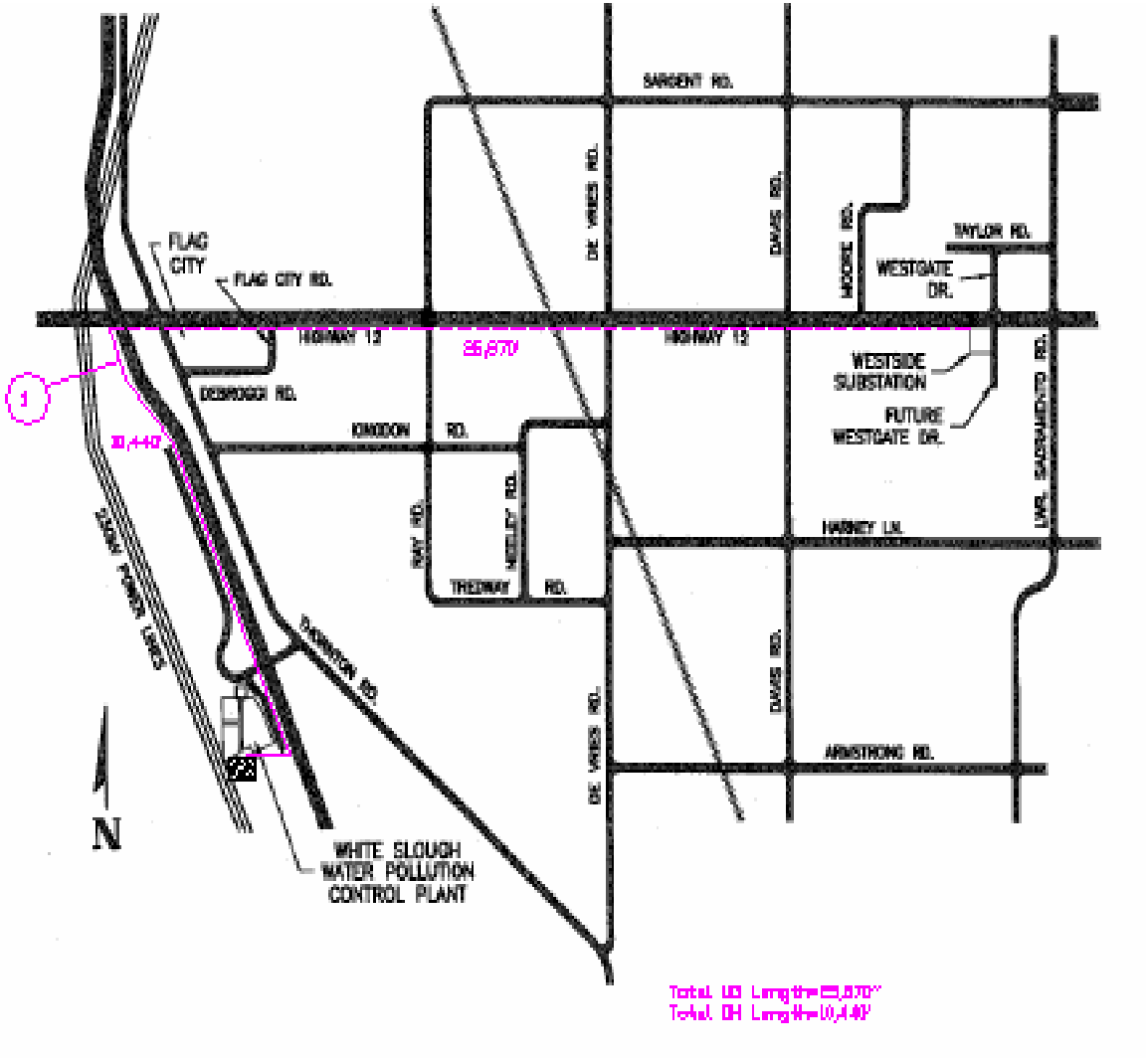
Avoids Southwest Gateway

Risks

Air Strip Mitigation

Visual Impact

Alternative 1



Scope

7.4 Miles, single circuit 60kV

- *90% Wood Poles, 55' Height*
- *10% Wood and/or Steel Poles, 65' – 90' Height.*

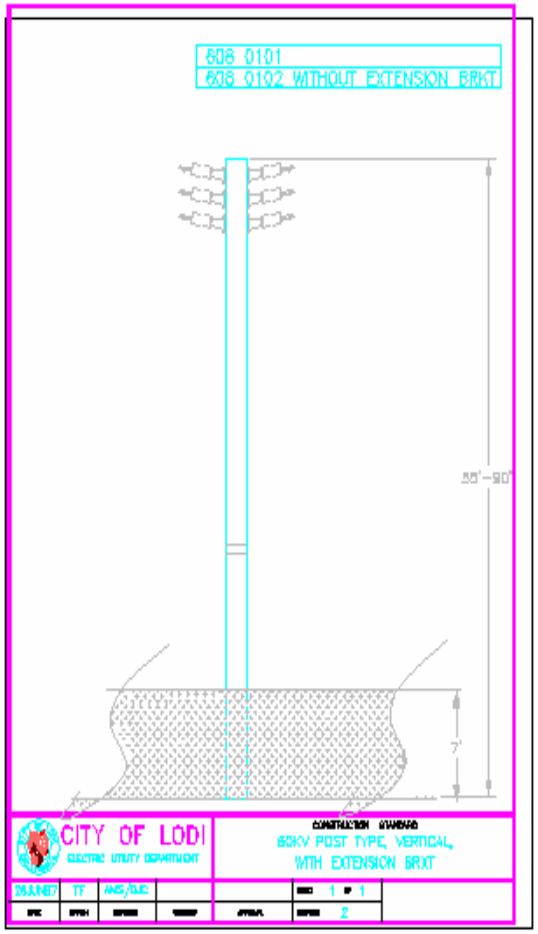
Benefits

- *Constructability*

Risks

- *Visual Impacts*

Wood Pole, 60kV Double Circuit



55 to 90 feet

Municipal Land Acquisition Rights

- Staff's goal is develop a project route and acquire siting rights in an affirmative, mutually agreeable manner.
- State law provides for electric utilities to acquire property outside its corporate limits for public purpose

Costs

- Routes range from about 5 to 7 miles
- Double circuit transmission line costs range from $1.5M (OH) to $20M (UG)
  - Overhead assumed at $50 per foot
  - Underground estimated at $600 per foot
- Additional 230KV/60KV interconnection costs estimated at about $5M
- Rough project cost estimate is $10 million

Savings

- Line to west gives utility opportunity to put generation “behind the meter”
- Savings of $1-2 million per year is very possible in reduced CAISO transmission wheeling charges
- Although project needed for reliability, it is possible for wheeling savings to more than offset cost.

Summary of Benefits

- Improve system reliability
- Reduce probability of City-wide outages
- Enhance electrical performance of local network
- Reduce transmission charges and losses
- Gain flexibility to change control areas if appropriate
- Increase import capacity into Lodi

Next Steps

- Obtain outside assistance to facilitate communications with impacted parties
- Work with property owners to identify a project routing that has the most acceptance and support
- Once route is identified, undertake needed design and environmental impact work
- Build project with an operational date not later than 2011-2012.